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STATISTICAL BULLETIN
Metropolitan Life Insurance Co.

VOL. XIII APRIL, 1932 No. 4

MORTALITY EXPERIENCE OF THE FIRST THREE MONTHS OF 1932

Following the most remarkable health year the United States and Canada have ever experienced, the first quarter of 1932 has registered a lower deathrate than ever previously recorded for any winter season. This is shown by the mortality statistics of the many millions of Metropolitan Industrial policyholders, who constitute a large cross-section of the populations of both countries, and whose health, more than that of any other group of the population, would be expected to feel the unfavorable effects of business depression and widespread unemployment.

More recently, however, certain unfavorable developments have been observed. For the four-week period ended April 23d, the deathrate was higher than in the like part of 1931. This development requires close watching. Nevertheless, the American and Canadian people have more than maintained the very favorable health standards which have prevailed in recent years. This is one of the most gratifying and reassuring developments in the entire history of public health in the two countries.

The current setback, however, will emphasize the warning issued recently by the President of the American Public Health Association against any program of economic retrenchment which will impair the efficiency of the Federal, State or Municipal health services. It is due largely to these organizations, with their trained personnels and excellent facilities for dealing with health problems, that the mortality rate has been held at the lowest point through more than two years of the worst industrial depression of a generation. The effectiveness of the health services must be safeguarded. Whatever other economies in public expenditures may be called for, we must not curtail appropriations which are needed to protect and conserve human life. It would be the worst possible business judgment to

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endanger our vital resources, which up to now have been maintained at their highest levels.

The deathrate of the Metropolitan Industrial policyholders for the quarter was 9.4 per thousand. The closest approach to this figure was 9.6—for the like period of 1930. The deathrate of the white policyholders dropped 6.3 per cent. from last year's January-March figure; and that for the colored declined 14.7 per cent.

Influenza and Pneumonia

Declines in the mortality from influenza and pneumonia have been the chief factors in bringing the deathrate down to the new minimum. The rate for the former dropped 41 per cent., as compared with that for the like months of 1931; and that for the latter, 26 per cent. Low deathrates from these diseases were recorded for the past winter in the face of widespread prevalence of sickness from influenza; but the cases were, for the most part, mild in type and seldom complicated by fatal pneumonias.

Diphtheria and Other Communicable Diseases of Childhood

The diphtheria deathrate shows a drop of more than 5 per cent. from that recorded during the winter of 1931. With such a decrease during the very season in which the mortality from diphtheria runs highest, there is every reason to expect that the almost continuous decline of more than two decades will be in evidence for the full year, and that the deathrate will drop, for the first time, below four per hundred thousand. Very low mortality rates are also shown for measles, scarlet fever, and whooping cough.

The Mortality from Tuberculosis Drops 12.6 Per Cent.

The heaviest mortality from tuberculosis occurs in the winter and spring. Yet for the winter months, the deathrate of the insured wage-earning population has dropped 12.6 per cent. below the previous minimum, recorded only last year. Three-fourths of 1932 are still ahead of us, but it is likely that this year will witness another minimum in the tuberculosis mortality rate.

Cancer Deathrate Continues to Rise

Following a noteworthy rise in the cancer deathrate in 1931, an increase of six per cent. was observed during the first quarter of 1932, as compared with the like period of last year. Thus, instead of the slow persistent increase in cancer mortality, which has been shown for years, the records of 1931 and early 1932 evidence a sharp acceleration in the rising deathrate.

Diabetes Deathrate Identical With That for First Quarter of 1931

The diabetes deathrate for the first quarter (24.6 per hundred thousand) is unchanged from last year's figure. The mortality increased, nevertheless, among the colored policyholders. The rising

Deathrates* per 100,000 Persons Exposed. First Quarters of 1930, 1931, 1932 Compared. By Color for Principal Causes of Death. Metropolitan Life Insurance Company, Weekly Premium-Paying Industrial Business

Causes of Death	Deathrates per 100,000 Persons Exposed*					
	White			Colored		
	Jan.-Mar. 1932	Jan.-Mar. 1931	Jan.-Mar. 1930	Jan.-Mar. 1932	Jan.-Mar. 1931	Jan.-Mar. 1930
All Causes of Death	865.7	924.1	869.5	1505.1	1763.5	1660.2
Typhoid fever	1.3	1.0	1.0	1.8	1.8	2.2
Measles	3.0	4.0	3.4	1.2	2.2	1.5
Scarlet fever	4.1	4.5	4.2	1.2	1.0	.9
Whooping cough	3.6	4.1	4.8	3.7	5.1	5.1
Diphtheria	6.1	6.2	9.7	1.8	3.0	4.0
Influenza	25.1	40.7	21.8	54.6	104.3	71.8
Meningococcus meningitis	1.5	2.6	3.7	2.0	9.3	12.9
Tuberculosis (All forms)	57.7	63.7	65.9	190.8	236.1	222.4
Tuberculosis of respiratory system	51.5	56.9	57.7	171.9	212.5	193.2
Tuberculosis of the meninges, etc.	2.6	2.5	3.6	4.3	4.3	6.4
Other forms of tuberculosis	3.7	4.3	4.6	14.7	19.3	22.8
Cancer	89.2	84.1	75.5	95.5	90.3	79.6
Diabetes	24.0	24.2	20.9	29.3	27.4	23.3
Alcoholism	2.8	3.2	3.2	4.9	3.7	5.1
Cerebral hemorrhage; apoplexy	60.4	59.1	54.5	134.6	138.9	133.4
Organic diseases of the heart	160.4	160.1	151.4	245.8	278.9	271.4
Total respiratory diseases	98.6	131.2	116.3	187.1	259.0	225.3
Bronchitis	3.0	4.2	4.5	5.7	4.5	4.7
Bronchopneumonia	33.8	50.4	42.7	47.2	74.1	66.5
Pneumonia (lobar and undefined)	54.0	67.5	60.7	120.8	164.4	142.2
Other diseases of respiratory system	7.8	9.1	8.5	13.4	16.0	11.8
Diarrhea and enteritis	8.5	10.4	11.6	5.5	10.8	11.7
Under 2 years	6.4	8.2	9.3	1.6	3.9	6.6
Two years and over	2.1	2.2	2.3	3.9	6.9	5.1
Acute nephritis	3.3	4.0	3.7	9.0	13.2	15.9
Chronic nephritis	66.2	66.1	64.1	139.3	146.4	128.9
Total puerperal state	10.9	11.2	13.2	14.9	17.9	18.8
Total external causes	63.3	63.4	67.3	92.7	107.4	120.1
Suicides	10.3	9.5	9.0	6.7	5.7	8.6
Homicides	3.4	3.5	3.5	30.5	30.7	31.9
Accidental and unspecified violence	49.7	50.4	54.7	55.4	71.0	79.6
Automobile accidents	18.4	17.9	17.3	18.1	22.3	18.4
All other and ill-defined causes of death	175.7	180.6	173.2	289.4	306.9	306.0

*All figures in this table include insured infants under one year of age. The rates for 1932 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

tendency of the mortality from diabetes has been for years much more pronounced among insured negroes than among the whites.

The "Degenerative" Diseases

The deathrates for cerebral hemorrhage and chronic nephritis are practically identical with those for the first quarter of 1931. A small decline is shown for heart diseases, due entirely to an improvement of 12 per cent. among insured colored people. Heart disease is still the leading cause of death, by a large margin, in the industrial population; it has held the first rank since 1921.

Low Deathrate from Diseases of Maternity

The year has begun auspiciously with respect to mortality from diseases of the puerperal state. Both white and colored insured women have shared in the improvement.

Deaths from Violence

The suicide deathrate has increased, as compared with the first quarter of 1931, among both white and colored policyholders. The rise amounted to 8.4 per cent. for white persons, and to 17.5 per cent. for the colored. The homicide deathrate dropped slightly, and that for automobile fatalities remained unchanged. This is the first time that the mortality from automobile accidents, during the first quarter of the year, has not been higher than for the corresponding period of the preceding year.

The table on page 3 presents the deathrates among white and colored policyholders, respectively, for the first three months of 1932, 1931, and 1930.

THE CHANGE IN RANK OF THE PRINCIPAL CAUSES OF DEATH

A comparison of the relative rank of the twenty leading causes of death, at the beginning of the century and at the end of the third decade, throws a bright light on the progress of medical and sanitary science and the developments of the public health movement during this period. Certain diseases which, thirty years ago, ranked high in their toll of human life now do not enter into the accounting of the important causes at all; and conditions which now assume high positions in the list were not included at the beginning of the twentieth century. Eleven diseases appear in both lists; and the relative rank of these is now, in most cases, different from that in the earlier period.

The most conspicuous example of a disease which has utterly disappeared as a leading cause of death is typhoid fever. Thirty years ago it ranked fourteenth on the list. Now typhoid fever is a vanishing disease, which takes a toll of only 2.4 lives per 100,000 of population, instead of 26.8 lives. The reduction in its mortality rate is one of the greatest triumphs of modern sanitary science. The problem which this disease still presents is almost entirely one of rural sanitation. Little importance attaches to the fact that items like meningitis, "convulsions," "old age," "ill-defined causes," "congenital debility" and "lack of care" no longer appear among the leading causes except as this indicates the progress of reporting practice in the direction of more accurate diagnosis and statement of the factors causing death. Accuracy in reporting diseases on death certificates, thirty years ago, was at a low ebb.

There are nine new items in the list for the years 1925-1929. They are diabetes (now ninth in rank); automobile accidents (tenth); angina pectoris (eleventh); accidental falls (thirteenth); appendicitis (fourteenth); suicide (fifteenth); congenital malformations (sixteenth); diseases of pregnancy and childbirth (seventeenth); and hernia and intestinal obstruction (eighteenth).

Of the diseases which were major causes of death thirty years ago, tuberculosis, heart disease, cancer, diphtheria, diarrhea and enteritis, and premature birth are the most noteworthy examples of change in rank.

In the first five-year period of the century, tuberculosis led all other diseases by a large margin, with a deathrate of 184.7 per 100,000. In the quinquennium 1925 to 1929, this disease fell to sixth in rank, with a deathrate of only 77.2—not greatly in excess of one-third of the earlier figure. Organic heart disease, which was third in order at the beginning of the century, is now the leading cause of death, with a mortality almost double that of thirty years ago. In only one respect have modern sanitation and medical science been able to effect any improvement in the mortality from cardiac diseases. There has been a considerable drop in the deathrate among children and in adults up to age 45; but in the older ages, we have lost ground heavily. One reservation must be made, namely, that the general aging of the population, which has taken place, is in part responsible for the rise in the crude deathrate for heart disease.

In 1900-1904, cancer was seventh on the list; now it is second, and the deathrate has increased 69 per cent. Cancer, often so terrible

in its manifestations, is the disease which has shown the most extreme change for the worse during the current century.

At the beginning of the century, diphtheria ranked twelfth; in 1925-1929 it stood last among the twenty leading causes. If the figures were extended to include one or two later years, diphtheria would not appear at all on the list. What has happened with respect to this disease is an object lesson of what sanitary science can accomplish when intelligently applied.

Infantile diarrhea has dropped from fifth rank in 1900-1904, to twelfth in 1925-1929, and there has been a drop in the actual deathrate from 91.4 per 100,000 to 18.0. Progress in the control of infantile diarrhea has been made through the increased supervision

Average Annual Deathrates per 100,000 for Leading Causes of Death, 1900-1904 and 1925-1929. Total Persons in Original Death Registration States

Cause of Death and Rank, 1900–1904	Annual Average Deathrates		Cause of Death and Rank, 1925–1929	Annual Average Death-rates, 1925–1929
	1900–1904	1925–1929		
1. Tuberculosis—(All forms)	184.7	77.2	1. Organic heart disease[1]	219.7
2. Pneumonia—(All forms)	161.5	103.1	2. Cancer	114.3
3. Heart disease[1]	127.7	219.7	3. Pneumonia—(All forms)	103.1
4. Nephritis[2]	93.6	96.6	4. Nephritis[2]	96.6
5. Diarrhea and enteritis (Under 2 years)	91.4*	18.0	5. Apoplexy	88.3
6. Apoplexy	75.6	88.3	6. Tuberculosis—(All forms)	77.2
7. Cancer	67.5	114.3	7. Premature birth	33.4
8. Ill-defined causes	48.4	2.4	8. Influenza	25.1
9. Old age	45.1	6.5	9. Diabetes mellitus	22.6
10. Bronchitis[2]	39.3	7.7	10. Automobile accidents[5]	21.5
11. Meningitis[3]	33.1	5.6	11. Angina pectoris	19.6
12. Diphtheria	32.8	7.6	12. Diarrhea and enteritis (Under 2 years)	18.0
13. Premature birth	32.6	33.4	13. Accidental falls	16.5
14. Typhoid fever	26.8	2.4	14. Appendicitis	15.2
15. Influenza	22.9	25.1	15. Suicide	14.2
16. Paralysis[4]	22.5	3.0	16. Congenital malformations	14.0
17. Congenital debility	21.8*	5.4	17. The puerperal state	12.1
18. Convulsions	19.8	1.1	18. Hernia, intestinal obstruction	10.8
19. "Other diseases of the stomach"	18.5	3.0	19. Bronchitis[2]	7.7
20. Lack of care	15.1*	0.1	20. Diphtheria	7.6

*Deathrate in Registration Area.

[1]Excluding pericarditis, acute endocarditis, acute myocarditis and angina pectoris.

[2]Acute and chronic.

[3]Including epidemic cerebrospinal form.

[4]Without specified cause.

[5]Excludes deaths in collisions of automobiles with railroad trains or street cars.

of food and water supplies, more intelligent care and feeding of infants, and generally improved standards of community sanitation.

Although there have not been large changes in the deathrates from premature birth and influenza, their relative ranks rose considerably in 1925-1929 as compared with 1900-1904. These changes in rank are due to the fact that mortality rates corresponding to the figures of thirty years ago now entail much higher positions in the list.

For certain of the causes of death which appear only in the 1925-1929 list, the deathrate has increased enormously since 1900. That for diabetes has doubled; that for angina pectoris has tripled; and for appendicitis there has been a rise of approximately 50 per cent. Automobile fatalities were so infrequent early in the century that no enumeration was made of them at all until 1906; now they stand tenth in importance among all the causes of death.

DEATHRATE FROM EPILEPSY DECLINING

This is the second article of a series relating to certain causes of death which are "minor" from the standpoint of numerical importance, but which have shown either striking changes in their trends of mortality, or which interest the medical profession increasingly because of recent advances in the knowledge of its causation or treatment.

The present article relates to epilepsy. This is a chronic functional nervous disorder, incurable in most cases, characterized by attacks of unconsciousness or convulsions, or both, and usually associated in the later stages with mental disturbance. The mortality data on which this article is based include deaths certified from either one of the two typical forms of the disease, that is, from either major or minor epilepsy.

Comparing the first ten years with the last ten years of a twenty-one-year series, 1911 to 1931, the deathrate from epilepsy among Metropolitan Industrial policyholders is found to have declined 36 per cent. This drop in the mortality, however, has not been at a uniform rate. During the first third of the twenty-one-year period, the deathrate fluctuated around 3.7 per 100,000. Following 1917, when the highest rate of the series was recorded (4.3 per 100,000), the deathrate dropped rapidly to 2.3, in 1924. Then the decline continued, but at a less rapid pace, and the lowest point was reached in 1931, when the deathrate was 2.0 per 100,000.

Among white persons, the downward trend has been somewhat more rapid for males than for females. Each age group, without exception, registered a lower rate in the period 1922-1931 than in the earlier decade, with the largest decreases in middle adult life and at the older ages. Among insured colored persons, on the other hand, the deathrate for females has declined much more rapidly than that for males. Actual increases in the mortality rate have occurred at 5 to 9, and 65 to 74 years among colored males, and at 10 to 14 years among colored females. It is interesting to note that the mortality from epilepsy in each of the ten-year series was higher for colored persons than for whites, particularly among the males.

In the absence of any outstanding recent advance in the treatment of epilepsy, it is difficult to account for the decline in the recorded deathrate since 1917. It may be that the drop is due to better dietary treatment and generally improved hygienic care of epileptics. Possibly the most important factor has been the decreasing proportion of epileptics who marry. More and more epileptics are receiving institutional care and are, therefore, segregated. Since the disease is often hereditary, this results in a decline in the number of epileptics—and in a relatively lower mortality from the disease.

Deathrates per 100,000 from Epilepsy. By Color, Sex and Age Periods. Metropolitan Life Insurance Company. Premium-Paying Industrial Business, 1911 to 1931

Age Period	Deathrates per 100,000								Per Cent. Change 1922–1931 Since 1911–1920			
	White				Colored				White		Colored	
	Males		Females		Males		Females					
	1922 to 1931	1911 to 1920	1922 to 1931	1911 to 1920	1922 to 1931	1911 to 1920	1922 to 1931	1911 to 1920	Males	Females	Males	Females
Ages 1–74*	2.8	4.5	1.8	2.7	4.1	5.7	1.9	3.5	—37.8	—33.3	—28.1	—45.7
Ages 1– 4	1.0	1.2	.8	1.1	1.1	2.7	.4	3.2	—16.7	—27.3	—59.3	—87.5
5– 9	1.2	1.3	.8	1.0	1.6	1.0	1.2	1.2	— 7.7	—20.0	+60.0	0.0
10–14	1.3	2.1	1.1	1.5	2.3	3.4	1.8	1.3	—38.1	—26.7	—32.4	+38.5
15–19	2.5	3.9	1.8	2.6	5.3	7.3	1.9	4.6	—35.9	—30.8	—27.4	—58.7
20–24	3.6	5.2	2.4	3.0	5.4	7.7	2.1	4.5	—30.8	—20.0	—29.9	—53.3
25–34	3.7	6.5	2.2	3.6	4.7	6.8	1.6	2.5	—43.1	—38.9	—30.9	—36.0
35–44	3.7	6.6	2.6	3.9	5.1	6.5	2.1	4.3	—43.9	—33.3	—21.5	—51.2
45–54	4.0	4.9	2.4	3.0	3.5	6.5	2.4	3.5	—18.4	—20.0	—46.2	—31.4
55–64	3.3	6.2	2.0	3.7	5.7	8.8	3.9	5.6	—46.8	—45.9	—35.2	—30.4
65–74	5.2	10.7	2.0	3.4	10.0	9.8	3.7	9.3	—51.4	—41.2	+ 2.0	—60.2

*Standardized deathrates at ages 1 to 74 years.

HEALTH RECORD FOR MARCH, 1932

The deathrate of Metropolitan Industrial policyholders rose sharply, in March, to 10.4 per thousand, as compared with 8.8 in February. The March mortality rate was nevertheless well below the average for that month during the last ten years. Among insured Canadians, in fact, the March deathrate was lower than in 1931; but throughout the United States an increase was in evidence.

Increased mortality in March, as compared with February, was observed for every cause of death listed in the table on page eleven, except typhoid fever, diphtheria, diarrheal diseases, puerperal conditions, suicides, and homicides. Comparison with March a year ago shows marked drops for influenza, tuberculosis, and pneumonia, which were slightly more than counterbalanced by increases for several other important causes of death.

The deathrate in the general population of the large cities of the United States, in March, was 13.6 per thousand estimated population, as compared with 12.3 in February, and 13.7 in March a year ago. More sickness than in February was reported from influenza, measles, scarlet fever, and smallpox; but there were fewer cases of diphtheria, poliomyelitis and typhoid fever. As compared with March, 1931, there was more sickness from influenza, scarlet fever, and typhoid fever together with fewer cases of diphtheria, measles, poliomyelitis, and smallpox.

Reports from 25 states show that influenza cases more than doubled in March as compared with February. The great bulk of this increase occurred in 7 states, namely, Tennessee, South Carolina, New Mexico, Wisconsin, Virginia, Maryland, and New Jersey.

Measles in 33 states increased from 34,651 cases in February to 47,115 in March, with the more noteworthy increases in New York, Ohio, Michigan, Wisconsin, and North Carolina. Scarlet fever cases, in 45 states, increased by a little more than 2,000 in March, as compared with February. Diphtheria cases, according to reports from 33 states, dropped from 4,683 in February to 3,683 in March.

With 46 states reporting, only 55 cases of poliomyelitis were recorded during March as compared with 128 in February. In New York, the decrease was from 26 cases to six, and in Illinois, from 20 cases to one.

A slight rise in smallpox cases was noted in March, with reports from 46 states showing 1,375 cases as compared with 1,334 in February. The largest increase occurred in Texas, where case reports numbered 179 in March against 77 during the previous month.

Substantial increases were also observed in Illinois, Michigan and Alabama.

Among the more noteworthy public health activities reported during March are the following: The W. K. Kellogg Foundation has provided for the establishment of a permanent fresh air camp for physically handicapped children with accommodations for 200, and with a camp season of from eight to nine weeks' duration. The first training school in the United States for graduate nurses in midwifery was opened February 2d at the Lobenstine Midwifery Clinic in New York. This venture is part of the plan for midwife training and supervision proposed by the Association for Promotion and Standardization of Midwifery. The Rockefeller Foundation recently granted $250,000 to the Vanderbilt University School of Medicine for a research fund. According to the Journal of The American Medical Association, plans to provide dental attention for semi-indigent children, and to reopen the Detroit Health Department's free dental clinics by means of volunteer service were formulated January 16 by a committee of the Detroit District Dental Society. With the Society and the Health Department cooperating a city-wide examination of school children is already under way.

The following table shows the mortality among Industrial policyholders for March, 1932; February, 1932, and March, 1931, together with the cumulative rate for the first three months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Deathrates* per 100,000 for Principal Causes Premium-Paying Business in Industrial Department (Annual Basis)

MONTHS OF MARCH, 1932; FEBRUARY, 1932, AND MARCH, 1931

CAUSES OF DEATH	ANNUAL RATE PER 100,000 LIVES EXPOSED*				
	Mar. 1932	Feb. 1932	Mar. 1931	Cumulative Jan.-March	
				1932	1931
TOTAL—ALL CAUSES	1,043.5	878.6	1,022.2	938.6	1,019.8
Typhoid fever	.9	1.5	.9	1.3	1.1
Measles	3.6	2.4	5.5	2.8	3.8
Scarlet fever	4.9	3.6	4.3	3.8	4.1
Whooping cough	4.6	3.4	3.8	3.6	4.2
Diphtheria	4.1	6.5	5.0	5.6	5.9
Influenza	43.6	22.5	52.5	28.4	47.9
Tuberculosis (All forms)	76.9	70.0	87.6	72.9	83.4
Tuberculosis of resp'y system	69.0	63.0	79.6	65.2	74.6
Cancer	93.2	86.9	84.1	89.9	84.8
Diabetes mellitus	27.6	22.3	24.0	24.6	24.6
Cerebral hemorrhage	77.6	61.7	64.8	68.8	68.2
Organic diseases of heart	188.7	158.1	171.3	170.1	173.6
Pneumonia (All forms)	123.7	84.3	126.7	97.0	131.6
Other respiratory diseases	13.3	12.3	13.3	11.7	14.1
Diarrhea and enteritis	7.5	7.8	9.5	8.2	10.4
Bright's Disease (Chronic nephritis)	78.9	68.0	74.0	74.6	75.2
Puerperal state	11.3	11.4	12.4	11.4	11.9
Suicides	9.4	10.4	9.6	9.9	9.1
Homicides	6.3	6.3	7.0	6.5	6.6
Other external causes (excluding suicides and homicides)	50.8	44.6	47.3	50.3	52.7
Traumatism by automobiles	15.8	15.7	16.4	18.4	18.4
All other causes	216.5	194.5	218.6	197.1	206.6

*All figures in this table include insured infants under one year of age. The rates for 1932 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

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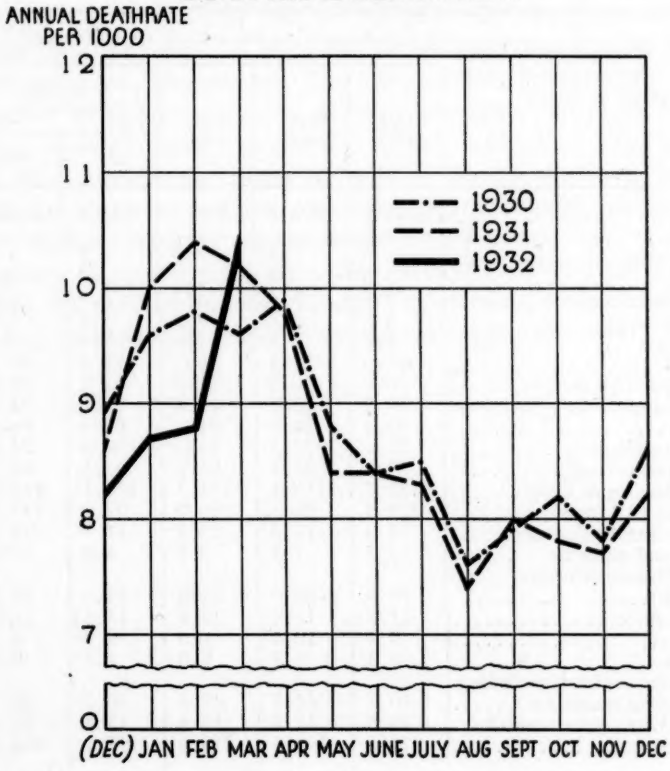
DEATHRATES
FROM ALL CAUSES

METROPOLITAN LIFE INSURANCE CO.
INDUSTRIAL DEPARTMENT



1930	9.6	9.8	9.6	9.9	8.8	8.4	8.5	7.6	7.9	8.2	7.8	8.6
1931	10.0	10.4	10.2	9.8	8.4	8.4	8.3	7.4	8.0	7.8	7.7	8.2
1932*	8.7	8.8	10.4									

* *Rates for 1932 are provisional*

METROPOLITAN LIFE INSURANCE COMPANY PRESS
NEW YORK, U.S.A.
78122